

GETTING IT RIGHT - NEW FIRE STATION PROJECT PLANNING

EXECUTIVE PLANNING

BY: Scott W. McGuff
City of Oldsmar Fire Department
Oldsmar, Florida

An applied research project submitted to the National Fire Academy
As part of the Executive Fire Officer Program

July 1999

ABSTRACT

The often-used phrase, failing to plan is planning to fail, was never more appropriate than when used in the context of building a new fire station. The problem is that the City of Oldsmar fire department has no planning tool for the design and construction of a new fire station. This research project analyzed effective methods for developing a project plan. The purpose of this research project was to identify current project planning methodology and create a project plan for the design and construction of a new fire station. Evaluative and action research methods were used to answer the following research questions:

1. What are the essential components needed to make a good project plan?
2. What are the important human factors in project planning?
3. What factors in project planning contribute to a successful or failed project result?

Procedures utilized included: review of written material on project planning and scheduling; review of written material on project success and failure.

The findings of the research indicate a definite correlation between definitive project planning and success or failure of projects. The findings further point out the importance of the project manager to a given project.

The major recommendation of the research was a fire station project planning document. Other recommendations were that the planning process information should be shared with other city management team members; further research dealing with project critique and plan documentation is needed.

TABLE OF CONTENTS

	PAGE
Abstract	ii
Table of Contents	iii
Introduction	1
Background and Significance	2
Literature Review	5
Procedures	9
Results	11
Discussion	18
Recommendations	21
References	22

APPENDICES

Appendix A – Fire Station Construction Plan	24
---------------------------------------------------	----

INTRODUCTION

The City of Oldsmar fire department provides fire prevention, fire suppression, and emergency medical services to the community from one fire station facility. This facility has existed on or near the same site since 1949. As the community has grown and services provided by the fire department have diversified the current facility is not strategically located and has been outgrown. In 1997 the fire department was given the mandate to select a site for construction of a new fire station. That mandate has been met. In 1998 the fire department was given a second mandate to prepare for and construct a new fire station in fiscal years 1998/1999 and 1999/2000. The problem is that the City of Oldsmar fire department has no planning tool for the design and construction of a new fire station.

The purpose of this research project was to identify current project planning methodology and create a project plan for the new fire station. City of Oldsmar personnel utilizing this information will be prepared for moving forward to meet the mandate given to them.

Evaluative and action research methods were used to answer the following research questions:

1. What are the essential components needed to make a good project plan?
2. What are the important human factors in project planning?
3. What factors in project planning contribute to a successful or failed project result?

BACKGROUND AND SIGNIFICANCE

Oldsmar Fire Department

The Oldsmar Fire Department provides fire and emergency services to the municipality of Oldsmar located in Pinellas County, Florida. The Oldsmar Fire Department provides services utilizing a combination department comprised of 15 career positions and 10 volunteer positions. The department operates from a single station and serves a resident population of 10,000. Oldsmar Fire Department is one of 20 fire and emergency services departments within Pinellas County. The other fire departments range from municipal fire departments, to dependent fire districts contracted to Pinellas County government for services, or independent special districts authorized by the State legislature to provide services. This diverse group has functionally consolidated many redundant functions, some with the help of Pinellas County government. Pinellas County oversees the 911 Public Safety Answering Point (PSAP) and dispatches all fire departments within the county. Pinellas County also provides Emergency Medical Services (EMS) through contracts with 17 fire service agencies for Advanced Life Support First Responder Services. The County also contracts with American Medical Response (AMR) for ambulance transport.

An automatic aid agreement exists between all providers. This agreement eliminates jurisdictional lines and ensures that the closest unit to an emergency incident is sent regardless of the community the event occurs in. The fire departments share a common set of Standard Operating Procedures and utilize group purchasing for equipment like fire hose, protective clothing, and many other items. The functional consolidation of fire and EMS services within Pinellas County brought together over

sixty fire stations and 1,200 fire fighters to provide emergency service to a resident population of almost one million people.

History

The Oldsmar fire department was formed as an all-volunteer organization in 1949. The department was housed with other City departments in a centrally located facility on State Street. As the City grew in built upon area and in population the fire department managed to provide services and found its location suitable. In the early 1980's the City experienced a massive building boom. Suddenly the population had doubled and the built upon areas of the city expanded tremendously. With the growth came increased demands for emergency services. In 1983 the city moved from an all-volunteer organization to a combination fire department. Throughout the 1980's and 1990's the city continued to grow and more people discovered Oldsmar's small city by the bay charm. The fire department also grew through these years. The services the fire department provided to the community expanded to meet citizen expectations. The fire department organization rapidly outgrew the existing station facility.

In 1995 the city created a community redevelopment district to encourage growth and revitalize the city's old downtown area. The fire station facility was located within this district. Growth of the city away from its original core strained the fire departments ability to provide rapid response to these areas. It was becoming clear that the current site of the fire station was no longer optimum for the community. The redevelopment efforts in the downtown area recognized the value of the current fire station site for development of something other than a fire station. The recommendation of the fire chief and the redevelopment agency to move the fire station was added to the city's strategic plan. The

following year the mandate to locate property for the new fire station was created by the city council.

Fire Station

The existing fire station utilized by the city was constructed in 1979 and occupied in early 1980. The department was at that time all volunteer and little thought, if any had been given to that status changing. The station reflected this. As the fire department changed to a combination organization with career personnel the facility quickly ran short of space. As more career personnel were added the space needs grew but could not easily be met. In 1989 the department added advanced life support emergency medical services. The need for more medical equipment storage space and more living room for firefighters necessitated the construction of additional climate controlled space on what had been apparatus floor.

The city continued to expand and response times began to indicate the current fire station was not in the best place. This was offset somewhat due to the automatic aid agreement in place. Growth was not limited to the City of Oldsmar. All of the surrounding communities were experiencing similar or greater growth. This impacted the availability of neighboring departments engine companies. An analysis was performed utilizing response statistics and computer modeling to identify the best location for the fire station. Eventually four sites were identified for possible fire station locations. Two of them were near the best location identified by the statistical analysis and modeling. One site was eliminated due to its size and possible difficulties with ingress and egress. The second site was eliminated because its location provided no real benefits for improving response times. The third site was rejected due to the acquisition price. The

fourth site, and the best site, was purchased in a creative method involving land swaps and cash. The Oldsmar fire department now had the land resources that were best situated for the community.

This paper was prepared to satisfy the applied research project requirements associated with the Executive Planning course at the National Fire Academy (NFA). A significant portion of that course was devoted to the discussion and application of planning. This research related to the area of project planning by reviewing current project planning theory. It also provided for the creation of a working fire station project plan for use by the city.

LITERATURE REVIEW

Fire protection needs must be planned for carefully. There are two important aspects to any good plan. The plan itself, which must be feasible and directed at clear goals and the process of plan development. Plan development must assure all major goals are considered and that every constituency affected by the plan is involved in the planning process (Granito, 1981). The effective management of project management is particularly important to the success of the public fire service organizations (ICMA, 1988). Fire service managers must acknowledge the growing public demand for accountability, for resources utilized, and services provided (Executive Planning, 1999). In their work, *Plan or Die – 10 Keys to Organizational Success*, Goodstein, Nolan, and Pfeiffer (1993) state:

Virtually every organization must examine not only how to maintain current levels of quality but also how to establish mechanisms that will assure constant improvement of the quality of the products and services. This necessity has

created great stress in organizations that have not had to deal significantly with this critical dimension in the past (p.7).

This growing demand for accountability while at the same time demanding improvement in the way fire service organizations perform dictates a new approach to planning is needed.

Project Planning Theory

In their 1996 work, *What Made Gertie Gallup*, Kharbunda and Pinto quote Otto Von Bismarck, “Fools you are...to say you learn by your experience...I prefer to profit by others mistakes and avoid the price of my own.” Failure may be a step to future success, however it is better, cheaper, and wiser to learn from other people’s failures. Organizations performing projects will usually divide each project into several project phases to provide better management control. This provides appropriate links to the on-going operations of the performing organization (PMI, 1996). There must be a definition phase within project management. In this phase questions must be asked to identify the purpose of the project and its objectives. How the objectives are to be achieved and what resources are needed are key to defining the project (Executive Planning, 1999). The planning phase of project management begins once the project has been adequately defined. At this point no activities or resources have been scheduled and the project team may yet to be selected (Executive Planning, 1999). Implementation of the project plan is the next phase. Here the project team focuses on how the project is progressing. They examine what actions may be necessary to get the project back on track or to maximize opportunity. Then the project team must look at how did the project go and what was learned (Executive Planning, 1999). Eventual action plans, i.e., project plans, must

acknowledge the organizations culture and stakeholders. A plan that does not do this will not garner support. It will fail to reflect what is important to the organization (Goodstein, Nolan, Pfeiffer, 1992).

Teams

The use of teams will greatly benefit major projects. Teams provide representation, input, and involvement from different levels of the organization. This results in more support for the project (Executive Planning, 1999). Kruger (1998) recommends that if you want the organization to go places, don't go it alone. If you are leading a big change in a large organization your best ally may be a great partner. That partner may well be an employee team. For change to be successful the leader must maximize the opportunity for people to have input into the change process (Coleman, 1995). Team building provides those opportunities. Pull the ownership of programs and policies out of the bureaucracy and put it into the hands of those who must deal with them (Gaebler, Osborne, 1993). Managers must be guided by one simple axiom: There are no limits to the ability to contribute on the part of a properly selected, well-trained, appropriately supported, and above all, committed person (Peters, 1987). Carter (1998) recommends that task groups work on problems and change initiatives. The advantage of the group is the combination of different ways of thinking and different points of view.

Participatory management decentralizes authority and eliminates bureaucracy (Gaebler, Osborne, 1993). The team management approach is necessary to catalyze all levels of the organization to solve problems. Paige (1995) discusses the implementation of innovation teams in three private sector companies. The teams were made up of employees from all organizational areas. The teams were challenged to create solutions to

short term organizational problems. Once that was accomplished, they worked on long term plans to develop a vision of what the organization would look like in the future.

Two of the three achieved the short-term goals and progressed to implement the long-range goals. The methods and techniques used in the business sector can be directly applied to emergency service organizations (Paige, 1995).

If you want employee involvement in seeking methods of innovating service delivery empower them (Heckerson, 1998). The organization and its' managers must be willing to include all levels of personnel in the planning process, from the bottom to the top (Shultz, 1996). Many cases have been reported where inadvertent employee involvement has lead to innovation and solutions to problems (Peters, 1987). Gaebler and Osborne (1993) devote a chapter to empowerment of communities to solve their own problems. Analogies can be made to the workplace. No one knows better the situation than those there. The bottom line is, involve employees in everything the organization does.

Teams must receive training in innovation skills (Paige, 1995). These skills include active listening, idea development, and different types of thinking. Kharbanda and Pinto (1996) feel the foremost guide for insuring project success is to transform the project team into a dedicated team of managers. Right from the start they must be determined to agree upon a plan and implement it fully and successfully.

The findings and observations of the works in the literature review convinced this author that a project plan was indeed needed by the City of Oldsmar fire department. Further, the need to select a qualified team representing the projects' stakeholders was

recognized as vital to the project. This researcher also recognized the overwhelming importance of the project manager to the team's final product.

PROCEDURES

Definition of Terms

For the purpose of this study, the following definitions apply:

Project. A temporary endeavor having a complex set of tasks, having a definite beginning and end, undertaken to create a unique product or service. Can be distinguished from routine, ongoing tasks and programs.

Project Management. The application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholders needs and expectations from a project.

Project Stakeholders. Individuals and organizations who are actively involved in the project or whose interests may be positively or negatively affected as a result of the project execution or successful project completion.

Deliverable. A tangible, verifiable work product such as a feasibility study, a detail design, or a working prototype.

Research Methodology

The methodologies utilized for this research project included evaluative research and action research. The desired outcome of the research project was to develop a fire station design and construction project plan meeting the needs of the City of Oldsmar fire department.

The research procedures used in preparing this paper began with a literature review at the Oldsmar Public Library in Oldsmar, Florida. Additional literature review

was performed at the Florida Southern University campus library in Lakeland, Florida; St. Petersburg Junior College Health Center Library in St. Petersburg, Florida; as well as Oldsmar Fire Department's periodical resources. The literature review was assisted by Internet searches for journal articles dealing with the subject. When an article or book reference was found on the Internet, it was noted for reference at the library to identify the primary source.

National Fire Academy Executive Planning course materials and class project materials were utilized to assist in the development of the new fire station project plan. The project plan is provided in Appendix A.

Assumptions and Limitations

Few limiting factors and assumptions impacted this research project. In the Tampa Bay area of Florida most of the research materials found on the subject of project planning are maintained at Florida Southern University. This researcher was limited to obtaining five books via inter-library loan procedures at his local library. This necessitated travel to the Florida Southern campus in Lakeland, Florida.

The desire to investigate other local fire service project planning documents was stalemated by their lack of existence. While many new fire stations have been constructed in Pinellas County within three years no fire service organization had created a project planning document.

The assumption was made that the result of this research project, the fire station project plan, would result in a better building. However, there can be no control project without a project plan to verify this assumption. It must be further assumed that projects

that have had problems, and have had no plan to guide the organization, would have benefited from a project plan.

RESULTS

Answers to Research Questions

1. What are the essential components needed to make a good project plan?

The project must first be well defined. The projects' purpose must be stated clearly and concisely. Resources that are needed must be identified (Executive Planning, 1999). The definition phase of project management is assisted using the following tools: the project statement; the project objectives; a work breakdown structure; the project resource analysis; and the project management discussion. The planning phase of project management follows the definition phase. However, no resources or activities have been scheduled. The project team may not be selected yet. The planning phase of project management is assisted using the following tools: the responsibility matrix; the project chart; contingency planning; and the resource schedule. Once the project has been defined and the project plan has been created the implementation phase, or execution, of project management may begin. The project team must constantly perform progress checks. If during these progress checks deficiencies or opportunities appear the team must take action to get back on track or capitalize. The team must perform a critique of the project to determine how things went and to record what was learned, good and bad, for future reference.

During implementation the project must be monitored and evaluated to be successful (Kharbanda, Pinto, 1996). There are three current methodologies for project

monitoring and evaluation. The first and most widely used is called feedback. Feedback is the most elementary of the three methods. It assesses the project following the occurrence of significant events or deliverables. Feedback may entail exception reports, which generally inform what is missing well after the point of repair. It is backward looking. The analogy here is to closing the barn door after the horse is gone. The second method is called concurrent monitoring. Concurrent monitoring provides real time data and information. The data is in a usable format so as to be actionable and cause immediate corrective action to be taken. Concurrent monitoring lends itself to computers and certain project monitoring software. However, someone must stay on top of the data entry and the reports must be usable. The third method is called feedforward. Feedforward identifies that present actions have future implications. It is a proactive method of monitoring. It requires the project team to look forward and make “what if” judgements.

Historically project success was measured by the organization based on feelings, how did the customer or the CEO like the result. This method of evaluation was imprecise at best. Project planners within organizations eventually developed the “triple constraint” evaluation process for use at the end of a project. The triple constraint based success on the following factors: was the project completed on time; was the project completed within budget; and is the project performance in the manner intended. These three constraints are widely in use today and certainly important to organizations performing projects. However, the primary thrust of the three constraints is to satisfy some interest group internal to the organization (Kharbanda, Pinto, 1996). Time and budget may be the concern of cost accountants that are tasked with keeping costs down.

Nowhere is the customer or end user identified in the three constraints. Kharbanda and Pinto (1996) recommend the inclusion of a fourth, or quadruple constraint, be added to the pillars of project success. That fourth constraint being customer satisfaction.

2. What are the important human factors in project planning?

The project must be supported and projected from the top of the organization. Strategic level managers must provide support through their authority and influence to make a success of a project plan (Executive Planning, 1999)(Goodstein, Nolan, Pfeiffer, 1993). Without adequate involvement of the necessary constituencies, implementation of the plan likely will fail due to a lack of cooperation (Granito, 1981). A team concept must be utilized. Team members must have diverse knowledge, skills, abilities, and strengths. The project team can help educate the entire organization through presentation and communication. They can generate enthusiasm for the project throughout the various constituencies.

Good project human resource management is vital to successful project completion. Human resource management includes three areas. They are organizational planning, staff acquisition, and team development. Organizational planning is used to identify team members; document and assign project roles and responsibilities; and delineate reporting relationships. Staff acquisition means getting the people needed and assigning them to the project. Team development is accomplished by appraising individual and team skills and providing training or education to enhance performance. The team must recognize that organizational cultures often have a direct influence on the project (PMI, 1996). A team proposing a high-risk approach is likely to secure approval

in an aggressive or entrepreneurial organization. If the organization is cautious or conservative the same team may never garner support for their plan.

The project team must be provided with a good project manager. The project manager must not only manage but lead. They are role models for the project and are most effective when they lead by example (Executive Planning, 1999). The Project Management Institute (PMI) standards committee (1996) listed these attributes for successful project managers. They must have good communication skills, both written and oral, and be capable of utilizing formal and informal reporting methods. They must be good negotiators, able to confer with others to reach agreement. The final attribute listed was that they must be problem solvers. Able to define and analyze a problem to identify viable solutions, then make decisions at the most appropriate time.

The project manager needs to practice effective facilitation, delegation, and communications skill (Executive Planning, 1999). With these skills the project leader may increase the overall effectiveness of the team. In their book, *Managing Fire Services*, the International City Management Association (ICMA) (1988) provides strategies for project managers to utilize to garner support for the project. They are: listening; doing seedwork for future projects; having visibility within the organization, but not too much; conduct yourself with openness and honesty; give credit to others, especially in the media; give prompt positive feedback; take reasonable risks; relay sincere compliments publicly; observe protocol; be aware of implied power; seek win-win situations versus win-lose; share ownership; work with line people; share information before taking action steps; be open to alternative suggestions.

Project leaders can help team members succeed by allowing for their growth, cultivating self-esteem, and recognizing their needs (Executive Planning, 1999). This increases the team member's ability to do a good job. An effective project leader recognizes and uses the knowledge, skills, abilities, talents and strengths of team members' (Executive Planning, 1999). The project team and the project manager must always realize that sometimes people will act unreasonable, insensible, or incompetently. Human beings are not infallible (Kharbanda, Pinto, 1996). The project manager must plan for problems not anticipate success.

3. What factors in project planning contribute to a successful or failed project result?

Proper project management really starts with a proper cost estimate right at the project definition stage. The importance of an estimate cannot be over emphasized. Project estimation is indeed a yardstick for project cost control. If the yardstick is faulty, projects start on the wrong foot (Kharbanda, Pinto, 1996). Cost estimating and scheduling, if unrealistic, may handcuff projects from the start. The inevitable cost overruns cast negative clouds over the project early, and in some cases these poor reputations have lingered throughout the projects existence. With many large projects initial budgets and schedules comprise best guesses as to the most likely costs to be incurred. It is no wonder so many stories abound about projects saddled with runaway budgets and schedules sliding as initial plans meet hard reality (Kharbanda, Pinto, 1996).

The number one cause of project failure is the inability or unwillingness of the project manager and team to engage in the "what if" trouble shooting guesswork before problems surface. Ignoring forward-looking activities in favor of concentration on

present status of the project is disastrous. Most failures can be traced to inadequate planning, inaccurate planning, or blind adherence to original plans regardless of how the environment has changed in the interim (Kharbanda, Pinto, 1996).

Why is poor planning a major source of failure? The project manager assignment may be given as an afterthought and the person chosen may not have the necessary tools or skills to complete the project successfully (Executive Planning, 1999). Project managers are under intense pressure from top management to show some visible signs of project progress. Public sector project managers are often expected to show results in less time than their corporate counterparts (ICMA, 1988). These pressures are counter-productive because they force the project manager and team into the wrong mode (project execution) far too early (Kharbanda, Pinto, 1996). The public sector project managers are visible to the community and the media, who may not understand the complexities of the project. This may create mandates that are emotionally charged, poorly conceived, and without option. They in fact may be impossible to perform (ICMA, 1988). Goodstein, Nolan, and Pfeiffer (1993) provide this formula for failure for project managers, “Plan an easy, quick process. Do not develop followership. Proceed with a fuzzy mission, do not waste time developing a clear vision. Avoid risks, reward those who successfully avoid taking them.”

The use of project teams will greatly benefit major projects (Executive Planning, 1999). Teams provide representation, input, and involvement from different levels of the organization. This results in more support throughout the organization for the project. Teams should have five to twelve members. The membership must include someone with responsibility for decision making, someone affected by the project, and someone with

the expertise in the area. If team meetings are handled in effectively the meetings can be frustrating, a waste of everyone's time, and costly. Meetings that allow information sharing, collecting ideas, problem solving, and decision making will be extremely beneficial to the team.

Without adequate involvement of the necessary stakeholders, implementation of the plan likely will fail due to a lack of concern and cooperation (Granito, 1981).

Stakeholder management is a major challenge of project management. Key stakeholders on every project include project managers, customers, performing organization and its employees, and the project sponsor with the financial resources. Managing stakeholder expectations may be difficult because stakeholders often have different objectives that may come into conflict. Differences between or among stakeholders should be resolved in favor of the customer (PMI, 1996).

Organizations generally fail to engage in their own honest post-failure project appraisal. The tendency is to avoid discussion of failure. Kharbanda and Pinto (1996) state:

In our experience, the problems that underscore such shaky track records are usually legion; however one common denominator shared by most troubled organizations is their unwillingness or inability to learn from past failure. Project review meetings, so important as a learning tool, are either perfunctory (in the case of success) or ignored (in the case of failure) (p.35).

The National Aeronautics and Space Administration (NASA) performed a study on 650 NASA projects (Executive Planning, 1999). The study identified six common characteristics of unsuccessful projects. They were: using the project management

process ineffectively; starting without a clearly defined need; selecting the wrong project manager; lacking upper management support; defining tasks inadequately; reluctance to end project. The same NASA study also identified ten characteristics of successful projects. They were: projecting teams commitment; accurate initial cost estimates; capable project team; adequate funding throughout the project; effective planning and control techniques; minimal amount of startup difficulty; task versus social orientation of project team; absence of bureaucratic organization and controls; project manager on site or close to project; clearly established criteria for success.

DISCUSSION

The results of the literature review dealing with project management were daunting. Projects without clearly defined goals generally spin out of control as goals are continually reassessed and interpreted while the budget grows and the estimated completion date slips further and further into the future. The Kharbanda and Pinto (1996) work, *What Made Gertie Gallup*, should be required reading for any individual entering into project planning or assigned as a project manager. The book details why projects fail and examines several failed project examples. The worst sorts of projects seem to be those that are established with vaguely defined or fuzzy mandates that permit a wide range of interpretations among members of the project team and organization. The more well defined the goals the clearer the indications are, both externally and internally, that the project team is succeeding.

It seems that many organizations begin the process of system design before identifying and analyzing the needs of the organization. Without planning, a costly project may end up not effectively serving the organization or be incapable of serving.

Planning outputs from other knowledge areas, historical information, organizational policies, and project constraints must be studied during project plan development.

To be effective in today's world of municipal management more attention needs to be placed on planning. Citizens are unwilling, and rightfully so, to accept mediocre project results. They want to get the biggest bang for their tax buck possible. This is doubly important for a small community like Oldsmar. The number of major projects undertaken in any year is small. A project failure or a project that runs into difficulty generally receives wide reporting and the project manager is scrutinized with the clarity of 20/20 hindsight. This has happened in Oldsmar on more than one occasion.

The importance of the project manager to the success or failure of the project was driven home by the literature review. All of the information presented about project managers was of particular interest to this researcher as he will be the fire station project manager. The NFA course and this applied research project were perfectly timed to allow this researcher maximum benefit towards the development of a project plan. It is interesting to reflect on the previous knowledge base of this researcher and how the new fire station project may have fared.

The action portion of this research, the new fire station project plan, will eliminate many of the pitfalls previous city projects may have fallen into. The project plan will provide a framework to begin with for the project team to work with. As the team works on the definition and planning phases of the project the plan may be revised or altered. These alterations will be a result of teamwork and provide buy in and support from all team members.

The new fire station project plan provides almost all of the components discussed in the research project. As the project team meets and continues the planning process the plan may be improved and enlarged to cover all important areas needing attention. The project mission statement, “The Oldsmar Fire Department will provide a plan for the design and construction for the new main fire station. This project will be completed within 24 months at a cost of 1.5 million dollars. The project start date will be February 15, 1999. The project will be completed by February 15, 2001”, is clear and provides a definite beginning and end. The plan provides five clear project objectives. They are:

1. The project team will obtain architectural and engineering services within 120 days.
2. The project team and architect shall develop and finalize construction drawings and specifications within 120 days that meet the constraints of the architectural contract.
3. The project team shall select a contractor within 120 days.
4. Upon award of bid the contractor shall complete construction of station within ten months.
5. The project team, with the architect and contractor will complete final acceptance of new station within two months.

Each of these project objectives has been provided in a work breakdown structure. In all there are approximately 100 task items in the work breakdown structure.

The team membership has been identified to meet the recommendations of the work reviewed in this research. It is a diverse group representing each major constituency. The plan provides a responsibility matrix and begins to examine the

potential resources for the planning phase. The plan also examines potential problems and potential opportunities.

RECOMMENDATIONS

The recommendations stemming from this study are:

1. The City of Oldsmar fire station project team should strive to follow, embellish, and fine-tune the new fire station project plan found in Appendix A.
2. The project planning process information should be shared with other top level City management team members to institutionalize the project planning concept within the City organization.
3. Further research in the area of project plan documentation, follow-up, and critique should be undertaken to solidify critical analysis of completed projects.

REFERENCES

- Carter, H.R. (1998, June). Who should be policy makers [Officers Call]. ISFSI The Voice 27:6, 19.
- Coleman, R. J. (1995, September). Don't clone the old – remake the new [Chief's Clipboard]. Fire Chief 39:9, 38-41.
- Executive Planning Student Manual. (1999). Emmitsburg, MD: National Fire Academy.
- Goodstein, L. D., Nolan, T. M., & Pfeiffer, W. J. (1992). Applied strategic planning: an overview. San Francisco: Jossey-Bass.
- Goodstein, L. D., Nolan, T. M., & Pfeiffer, W. J. (1993). Plan or die – 10 keys to organizational success. San Francisco: Jossey-Bass.
- Granito, J. (1981) Evaluation and planning of public fire protection. In Fire protection handbook (15th ed.). (section 14/chapter 7). Quincy, MA: NFPA.
- Heckerson, E. W. (1998, October). 21 steps to the 21st century – preparing fire service EMS for the future. Firehouse, 45-50.
- International City Management Association (ICMA). (1988). Managing fire services (2nd ed.). Washington: ICMA
- Kharbanda, O. P. & Pinto, J. K. (1996). What made gertie gallop? Lessons from project failures. New York: Van Nostrand Reinhold.
- Kruger, P. (1998, November). It takes two. Fast Company, 212-226.
- Gaebler, T. & Osborne, D. (1993). Reinventing government: how the entrepreneurial spirit is transforming the public sector. New York: Plume.

Paige, P. L. (1995, May). Ways to cultivate that creative bloom. Fire Chief 39:5, 65-74.

Peters, T. (1987). Thriving on chaos- handbook for a management revolution. New York: Harper-Row.

Project Management Institute (PMI) Standards Committee. (1996). A guide to the project management body of knowledge. Sylva, NC: PMI Communications.

Shultz, C. (1996, April). County-based EMS prepares for the next millennium. Fire Chief 40:4, 48-51.

Appendix A

City of Oldsmar Fire Department

Fire Station Construction Project

“Protecting Life and Property”

Project Team:

Marnie Burns
Scott McGuff
Greg Newland
Tom Ott

Pat Raynor
Craig Reed
Tony Tedesco

Table of Contents

Executive Summary26
Organizational Mandate27
Project Statement27
Project Objectives27
Work Breakdown Structure28
Responsibility Matrix32
Resource Requirements36
Potential Opportunities/Problems38

Executive Summary

The City of Oldsmar made the decision to relocate its fire station two years ago. Population and structure growth dictated that the current station location was inadequate. Redevelopment of the City's downtown area also spurred relocation of the existing station. The current fire station property had become more valuable for redevelopment purposes.

The fire department was given the mandate to locate property within the City for construction of a new fire station. Contacts were made within the community for citizen input. The fire department evaluated response statistics. Assistance was obtained from the county utilizing computer modeling software. Four sites were eventually identified for further review. Two of these were eventually dropped from consideration due to inadequate lot size and access limitations. The two remaining sites were appraised and negotiations were entered into for purchase. The final site selection was based on location, price, and developer assistance. The selected site is on the eastern side of Pine Avenue North approximately 800 feet north of Tampa Road and south of Forest Lakes Elementary School.

The fire department has now been given the mandate to construct a new fire station with an emergency operations center (EOC) and to relocate the employee fitness center in the new station. The mandate also provides for the site design of a community park on the fire station site.

The immediate concern for the City of Oldsmar is to complete a project plan for all construction phases. The long-range concern is to provide adequate land, planning, and financial resources for the community park and future park improvements.

Organizational Mandate

In 1997 the City of Oldsmar Fire Department was given the mandate to select a site for construction of a new fire station. That mandate has been met. In 1998 the fire department was given a second mandate to prepare for and construct a new fire station with an Emergency Operations Center (EOC) , relocated employee fitness center, and community park in fiscal years 98/99 and 99/2000.

PROJECT PLAN

Project Statement

The Oldsmar Fire Department will provide a plan for the design and construction for the new main fire station. This project will be completed within 24 months at a cost of 1.5 million dollars. The project start date will be February 15, 1999. The project will be completed by February 15, 2001.

Project Objectives

- 1- The project team will obtain architectural and engineering services within 120 days.
- 2- The project team and architect shall develop and finalize construction drawings and specifications within 120 days that meet the constraints of the architectural contract.
- 3- The project team shall select contractor within 120 days.
- 4- Upon award of bid, contractor shall complete construction of station within 10 months.
- 5- The project team, with architect and contractor will complete final acceptance of new station within 2 months.

Work Breakdown Structure

1.0 The project team will obtain architectural and engineering services within 120 days.

1.1 Develop a Request for Proposal (RFP).

1.1.1 Obtain current fire service RFP examples

1.1.2 Discuss examples with community representatives for successful outcomes

1.2 Advertise RFP

1.2.1 Develop draft RFP language

1.2.2 Ensure draft includes references to Local Strategy Mitigation Grants

1.2.3 Provide draft RFP language to City Attorney and City Manager for review and comment

1.2.4 Receive comments and finalize RFP language

1.2.5 Submit final RFP to City Manager for City Council authorization to advertise

1.2.6 Review City bidder list for architects and enhance if needed

1.2.7 Advertise RFP

1.3 Receive and evaluate proposals

1.3.1 Develop evaluation matrix

1.3.2 Receive and time/date stamp ten proposals

1.3.3 Distribute proposals to team members for review and Individual evaluation

1.3.4 Team meeting to evaluate and rank proposals

1.3.5 Develop potential questions for interviews

1.3.6 Provide ranked proposals to City Attorney for review and comment

1.4 Interview qualified applicants

1.4.1 Notify all proposal submitters of interview selections

1.4.2 Schedule dates/times for timed presentations and interviews

1.4.3 Final evaluation and ranking

- 1.4.4 Provide rankings to City Manager
- 1.5 Negotiate architectural contract
 - 1.5.1 Meet with City Manager/Attorney regarding architectural services contract
 - 1.5.2 Schedule highest ranked firm for negotiations
 - 1.5.3 Meet with highest ranked firm
 - 1.5.4 Schedule next firm if necessary
- 1.6 Determine that zoning and land use of property are satisfactory for use
 - 1.6.1 Send memorandum to Community Development Department
- 2.0 The project team and architect shall develop and finalize construction drawings and specifications within 120 days that meet the constraints of the architectural contact.
 - 2.1 Solicit input from stakeholders of project
 - 2.1.1 Meet with employees
 - 2.1.2 Meet with city manager and council members
 - 2.1.3 Conduct public workshop
 - 2.2 Establish facility parameters
 - 2.2.1 Review other plans/specifications
 - 2.2.2 Visit other fire stations
 - 2.2.2.1 Create checklist by functional area
 - 2.3 Perform needs assessment
 - 2.3.1 Obtain county communications input
 - 2.3.2 Obtain City MIS input
 - 2.3.3 Obtain Parks & Recreation Board input
 - 2.4 Provide architect with information for preliminary drawings
 - 2.5 Receive and review preliminary plans from architect
 - 2.5.1 Review and identify modifications as needed
 - 2.5.2 City council presentation
 - 2.6 Receive and review 80% drawings
 - 2.6.1 Submit park plans to Park & Recreation Board for comment

- 2.6.2 Submit site drawings to TRC for review and comment
 - 2.6.1.1 TRC will seek council approval
- 2.6.3 Submit to building official for review and comment
- 2.6.4 Review and identify modifications as needed with architect
- 2.7 Receive and review 100% drawings
 - 2.7.1 Submit drawings to building official for approval and permit
 - 2.7.2 Submit revised drawings to TRC for approval
 - 2.7.3 Submit final park drawings to Park & Recreation Board
 - 2.7.3.1 Obtain board recommendation for approval
 - 2.7.4 City council presentation for final approval
- 2.8 Accept final plans and specifications suitable for bidding
- 3.0 Team shall select contractor within 120 days
 - 3.1 Develop a request for bid
 - 3.1.1 Obtain city language for bid advertisement
 - 3.1.2 Review other agencies bid documents
 - 3.2 Advertise bid
 - 3.2.1 Include pre-bid conference date, time, and place
 - 3.3 Hold pre-bid conference with interested parties
 - 3.3.1 Architect to attend
 - 3.3.2 Record for future clarifications
 - 3.4 Receive and evaluate bids
 - 3.4.1 Develop evaluation matrix
 - 3.4.2 Receive and time/date stamp submittals
 - 3.4.3 Distribute to team members for review and individual evaluation
 - 3.4.4 Contact references
 - 3.4.5 Determine qualified bidders
 - 3.5 Team meeting to select preferred bidder
 - 3.6 Submit bid award recommendation to city manager
 - 3.6.1 Prepare city council packet material
 - 3.6.2 City council meeting for approval
 - 3.7 Notify successful contractor of award

- 3.7.1 City attorney to review contract documents
 - 3.7.2 Set date for pre-construction meeting
 - 3.7.3 Establish start date for construction
- 4.0 Upon award of bid, contractor shall complete construction of station within 10 months.
 - 4.1 Project manager to act as liaison from committee to contractor
 - 4.2 Schedule groundbreaking ceremony
 - 4.2.1 Create plan for groundbreaking
 - 4.3 Ensure architect is providing construction inspection services
 - 4.4 Establish weekly construction meeting schedule
 - 4.5 Conduct team meetings to provide status updates
 - 4.5.1 Conduct monthly team site inspections
 - 4.5.2 Schedule employee/shift visits to site
- 5.0 The project team, with architect and contractor will complete final acceptance of new station within 2 months.
 - 5.1 Conduct inspection of facility with project team, architect, contractor
 - 5.1.1 Schedule time and date
 - 5.2 Project team to create moving plan
 - 5.3 Develop Furnishings Needs
 - 5.4 Identify a “punch” list of work items remaining
 - 5.5 Contractor will complete “punch” list items
 - 5.5.1 Set time schedule for completion
 - 5.6 Re-inspect facility
 - 5.6.1 Schedule time and date
 - 5.7 Obtain Certificate of Occupancy
 - 5.7.1 Schedule date and time for final inspection
 - 5.7.2 Architect to attend
 - 5.8 Accept building
 - 5.8.1 Obtain all warranty statements on equipment
 - 5.7.1 Secure final as built drawings form contractor/architect

Responsibility Matrix

1.0 The project team will obtain architectural and engineering services within 120 days	
Performance Task	Responsible
1.1 Develop a Request for Proposal (RFP).	
1.1.1 Obtain current fire service and recent City RFP examples	Local FD's – Pat/Tony Florida Chief's – Scott City – Craig/Marnie Nearby counties – Tom/Greg
1.1.2 Discuss RFP examples with community representatives for outcomes	Same as above
1.2 Advertise RFP	
1.2.1 Develop draft RFP language	Project Team
1.2.2 Ensure draft includes references to Local Strategy Mitigation Grants	Scott/Community Development Director
1.2.3 Provide draft RFP language to City Manager and Asst. City Manager for review and comment	Scott/City Manager Asst. City Manager
1.2.4 Receive comments and finalize RFP language	Project Team
1.2.4 Submit final RFP to City Manager for City Council authorization to advertise	Scott/Pat
1.2.6 Review City bidder list and enhance if needed	Project Team
1.2.7 Advertise and distribute RFP	Marnie/Admin. Services
1.3 Receive and evaluate proposals	
1.3.1 Develop evaluation matrix	Craig/Project Team
1.3.2 Receive and time/date stamp ten proposals	Administrative Services
1.3.3 Distribute proposals to team members for review and individual evaluation	Scott/Marnie
1.3.4 Team meeting to evaluate and rank proposals	Project Team
1.3.5 Develop potential questions for interviews	Project Team
1.3.6 Provide ranked proposals to City Attorney for review and comment	Pat
1.4 Interview qualified applicants	
1.4.1 Notify all proposal submitters of interview selections	Marnie/Pat
1.4.2 Schedule dates/times for time limited presentations and interviews	Tony
1.4.3 Final evaluation and ranking	Project Team

1.4.4 Provide rankings to City Manager	Scott
1.5 Select and negotiate architectural contract	
1.5.1 Meet with City Manager/Attorney regarding architectural services contract	Marnie/Scott
1.5.2 Schedule highest ranked firm for negotiation	Tony
1.5.3 Meet with highest ranked firm	Marnie/Scott/Attorney
1.5.4 Schedule next firm if necessary	Scott
1.6 Determine Land Use and Zoning are satisfactory	
1.6.1 Send memorandum to Community Development	Scott

2.0 The project team and architect shall develop construction drawings for bidding within 120 days.	
Performance Task	Responsible
2.1 Solicit input from stakeholders of project	
2.1.1 Meet with fire department employees	Tom, Tony, Greg
2.1.2 Meet with City Manager and Council members	Scott
2.1.3 Conduct public workshop	Pat, Greg
2.2 Establish facility parameters	
2.2.1 Review other plans/specifications	Team
2.2.2 Visit other fire station facilities	Team
2.2.2.1 Create checklist by functional area	Scott
2.3 Perform needs assessment	
2.3.1 Obtain County Communications input	Scott
2.3.2 Obtain City MIS input	Scott
2.3.3 Obtain Parks and Recreation Board input	Scott, Tom
2.4 Provide architect information for preliminary drawings	
2.5 Receive and review preliminary drawings	
2.5.1 Review and identify modifications as needed	Team
2.5.2 City Council presentation	Team
2.6 Receive and review 80% drawings	
2.6.1 Submit park plans to Parks and Recreation Board	Scott, Tom
2.6.2 Submit site drawings to TRC for review and comment	Scott, Pat
2.6.2.1 TRC will schedule Council site approval	Community Dev. Dir.
2.6.3 Submit plans to building official for comment	Pat
2.6.4 Review and identify modifications with architect	Team

2.7 Receive and review 100% drawings	
2.7.1 Submit drawings to building official for permitting	Pat
2.7.2 Submit revised drawings to TRC for site approval	Pat
2.7.3 Submit drawings to Parks and Recreation Board	Scott, Tom
2.7.3.1 Obtain Board recommendation for approval	Scott, Tom
2.7.4 City Council presentation for final approval	Team, Architect
2.8 Accept final plans and specifications suitable for bidding	

3.0 Team shall select building contractor within 120 days	
Performance Task	Responsible
3.1 Develop a request for bid	
3.1.1 Obtain City language for bid advertisement	Marnie
3.1.2 Review other agencies bid documents	Team
3.2 Advertise bid	
3.2.1 Include pre-bid conference date, time, and place	Marnie
3.3 Hold pre-bid conference	
3.3.1 Architect to attend	Scott, Greg, Architect
3.3.2 Record for future clarifications	City Clerks Office
3.4 Receive and evaluate bids	
3.4.1 Develop evaluation matrix	Scott
3.4.2 Receive and time/date stamp submittals	Admin. Services Dept.
3.4.3 Distribute to team for individual evaluation	Pat
3.4.4 Contact references	Pat, Tony, Tom
3.4.5 Determine qualified bidders	Team
3.5 Team meeting to select and rank preferred bidders	
3.6 Submit bid award recommendation to city manager	
3.6.1 Prepare city council packet materials	Scott
3.6.2 City council meeting for approval	Team
3.7 Notify successful bidder of award	
3.7.1 City attorney to review contract documents	Pat, City Attorney
3.7.2 Set date for pre-construction meeting	Team, Architect
3.7.3 Establish start date for construction	Team, Contractor, Architect

4.0 Upon award of bid contractor shall complete construction within ten months.	
Performance Task	Responsible
4.1 Project manager to act as liaison from team to contractor	
4.2 Schedule groundbreaking ceremony	
4.2.1 Create plan for groundbreaking ceremony	Tony, Pat
4.3 Ensure architect is providing construction inspection services	Scott
	Scott, Architect, Contractor
4.4 Conduct team meetings to provide status updates	
4.5.1 Conduct monthly team site inspections	Team
4.5.2 Schedule employee/shift site visits	Greg

5.0 The project team, with architect and contractor will complete final acceptance of new fire station within two months.	
Performance Task	Responsible
5.1 Conduct inspection of facility with project team, architect, and contractor	
5.1.1 Schedule date and time	Scott
5.2 Develop moving plan	Pat, Tom
5.3 Develop furnishings needs	Tony, Tom
5.4 Identify “punch list” of work items remaining	Scott, Architect
5.5 Contractor will complete “punch list”	
5.5.1 Set time schedule for completion	Architect
5.6 Re-inspect facility	
5.6.1 Schedule time and date	Scott, Architect
5.7 Obtain certificate of occupancy	
5.7.1 Schedule date and time for final inspection	Pat
5.7.2 Architect to attend	Scott
5.8 Accept building	
5.8.1 Obtain all warranty statements on equipment	Scott, Architect
5.8.2 Secure final as-built drawings from contractor/architect	Scott

Resource Requirements

	PERSONNEL	FACILITIES	EQUIPMENT	MATERIALS
1.0 Obtain Contract				
1.1 Develop RFP	Project Team, Lawyer	Meeting Room	Computer Printer Overhead	Paper, pencils
1.2 Advertise	Administrative Services			
1.3 Receive & evaluate	Project Team, Lawyer	Meeting Room	Computer Printer Overhead	Paper, pencils
1.4 Interview & select	Project Team	Meeting Room	Overhead	Paper, pencils
1.5 Negotiate contract	Project Team Leader, Admin. Service Director, Lawyer	Meeting Room		

	PERSONNEL	FACILITIES	EQUIPMENT	MATERIALS
2.0 Drawings for Bidding				
2.1 Solicit Input	Team, council, employees, city manager, citizens	Meeting rooms- small and large	Audio/visual equipment for citizen input meeting	Paper, pencils, address info for school and neighborhoods
2.2 Establish parameters	Team	Meeting room	Large table, arch./eng. scales	Plans, paper, pencils
2.3 Perform assessment	Team, county communication, MIS, Park & Rec Board	Meeting room		Paper, pencils
2.4 Provide architect info	Team	Meeting Room	PowerPoint	Written info, paper, pencils
2.5 Review preliminaries	Team	Meeting room	Large table, arch./eng. scales	Plans, paper, pencils
2.6 Review 80% drawings	Team, TRC, Council, Park & Rec Board	Meeting room	Large table, arch./eng. scales	Plans, paper, pencils

2.7 Review 100% drawings	Team, TRC, Council, Park & Rec Board	Meeting room	Large table, arch./eng. scales	Plans, paper, pencils
2.8 Accept final plans & specs	Scott			

Potential Opportunities/Problems

Potential Opportunity Analysis (POA)

- Developer contribution to emergency signal preemption
- Site development funds from Parkland impact fees
- Site development funds from street improvement fund
- Grant funds for EOC construction/improvements
- Developer contribution of additional parkland

Potential Problem Analysis (PPA)

- Weather delays
- Soil bearing analysis
- Delay in obtaining construction materials
- Insufficient budget projection
- Delayed acceptance/occupancy